

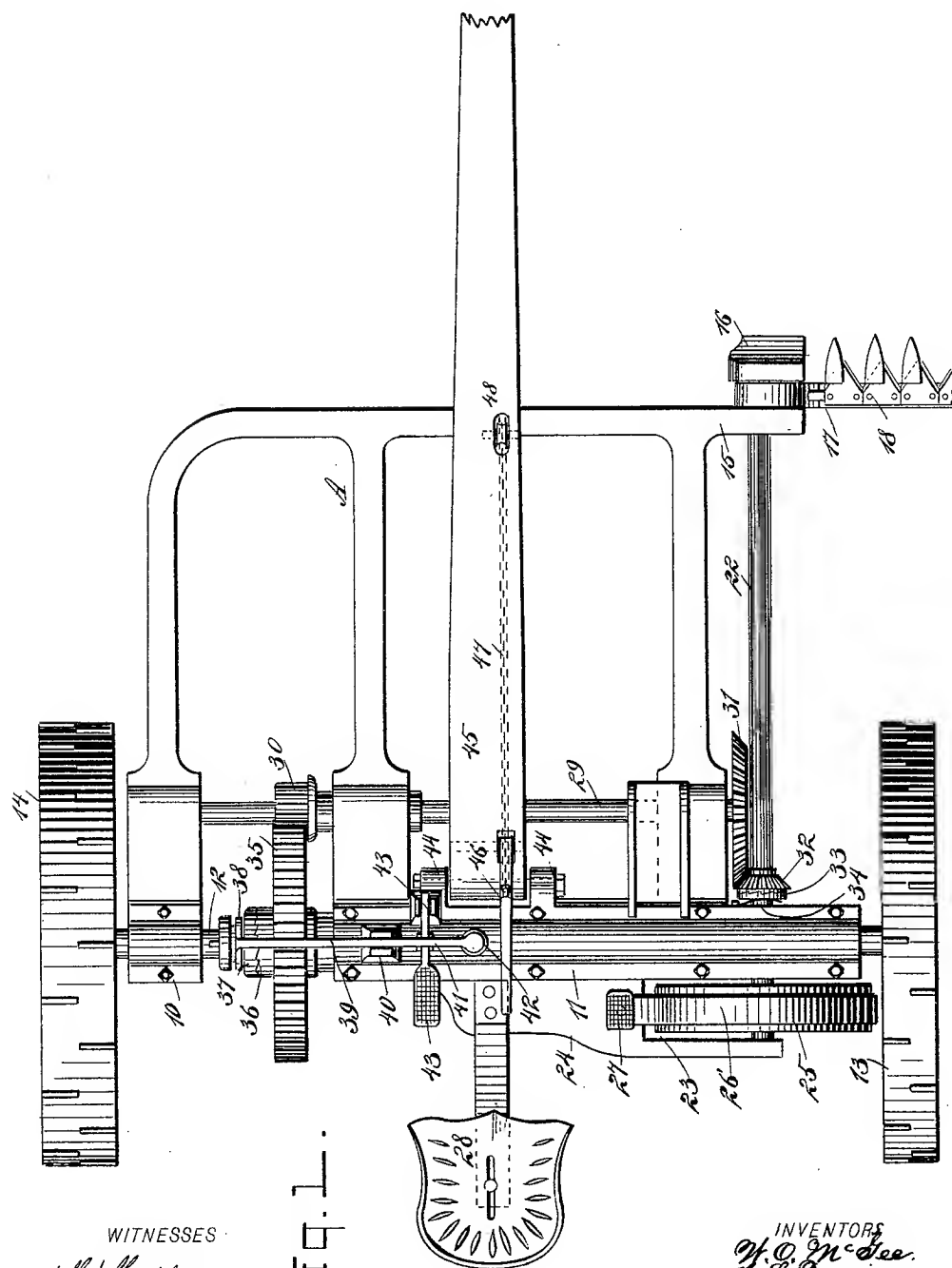
(No Model.)

2 Sheets—Sheet 1.

W. O. MCGEE & C. L. DOWNING.
MOWING MACHINE.

No. 600,015.

Patented Mar. 1, 1898.

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WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

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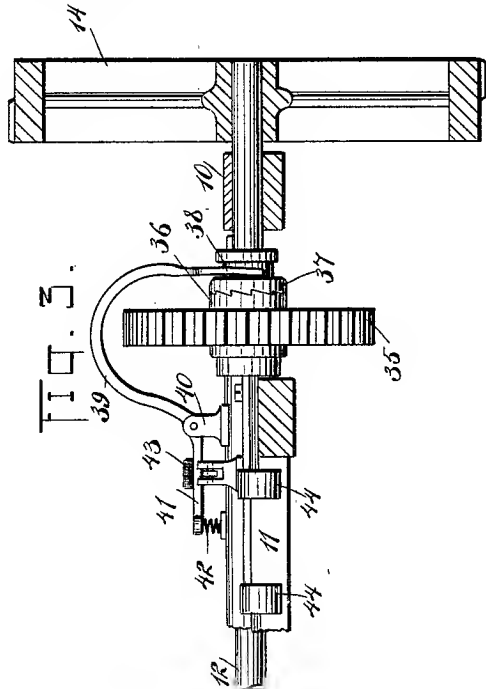


FIG. 3.

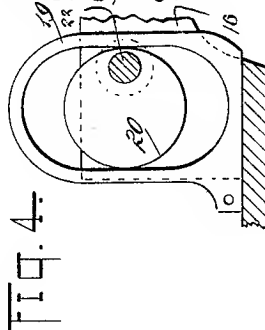
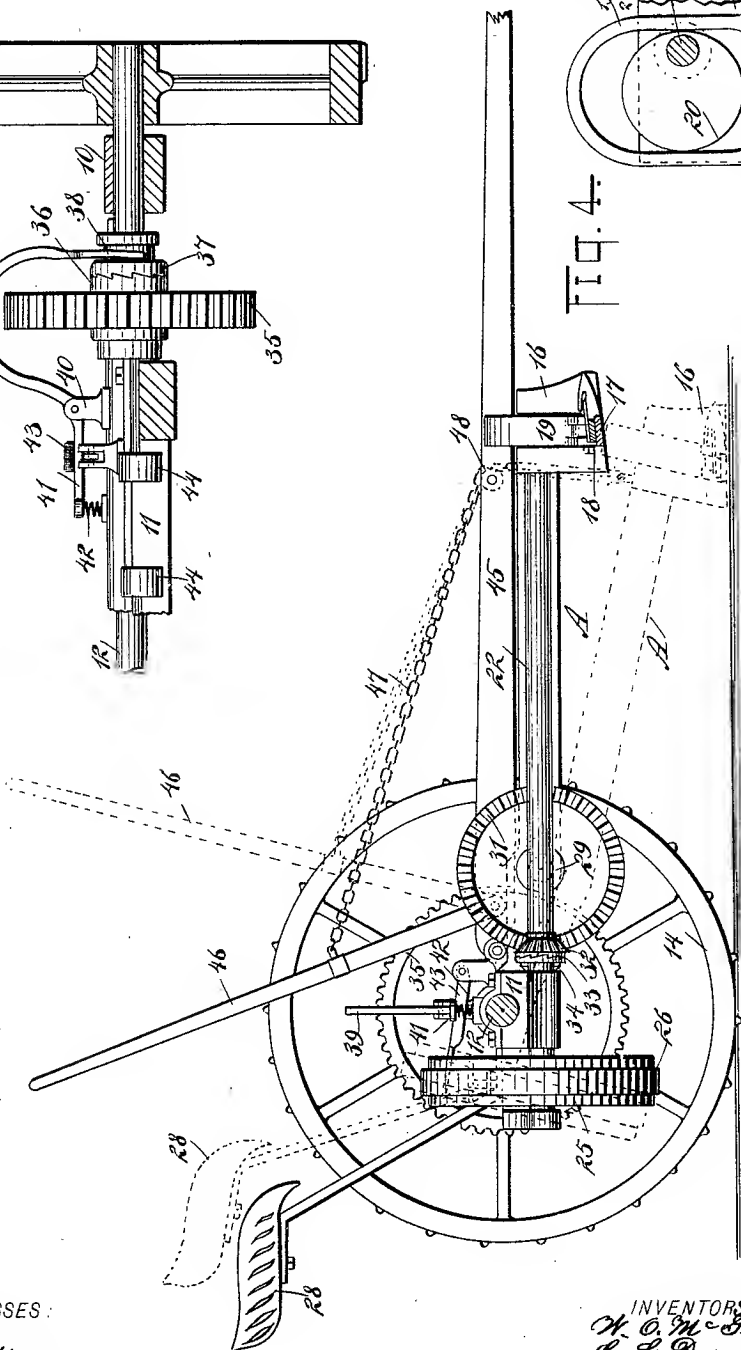


FIG. 4.

FIG. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM O. MCGEE AND CHARLES L. DOWNING, OF GALLATIN, MISSOURI.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 600,015, dated March 1, 1898.

Application filed July 14, 1897. Serial No. 644,558. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM O. MCGEE and CHARLES L. DOWNING, of Gallatin, in the county of Daviess and State of Missouri, have invented a new and Improved Mowing-Machine, of which the following is a full, clear, and exact description.

The object of our invention is to provide a mowing-machine wherein the gearing will be reduced to a minimum and wherein but few parts will be employed and the various parts made light, yet strong, thus providing an economic yet effective machine.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved machine. Fig. 2 is a section taken through the axle near the right-hand ground-wheel and through the finger-bar, the rest of the machine being shown in side elevation. Fig. 3 is a detail side elevation through the drop-frame near the axle and likewise through the left-hand ground-wheel; and Fig. 4 is a detail sectional view of the eccentric and the eye in which it operates, which eye is connected with the sickle-bar.

The drop-frame A, which is the forward portion of the machine, is made as light as possible consistent with strength, and at the left-hand rear portion is provided with a box 10 and a second and longer box 11, the two boxes serving to journal the axle 12. A ground-wheel is secured to each end of the axle, the right-hand ground-wheel being designated as 13 and the left-hand ground-wheel as 14, the latter ground-wheel being made about one-third heavier than the right-hand ground-wheel to overcome side draft.

The drop-frame is provided with a horizontal extension 15 at its forward right-hand corner, and a shoe 16 is secured to this extension. The finger-bar 17 is hinged or otherwise secured to the right-hand end of the shoe 16, the finger-bar being provided with the usual sickle-bar 18, which sickle-bar is connected with an eye 19, preferably of elongated

shape, held to slide in the shoe between the upright portion thereof and the extension 15 of the drop-frame. An eccentric 20 is fitted in the eye 19, the said eccentric being secured upon a shaft 22, which may be termed a "sickle-shaft," the said shaft being journaled in the extension 15 and beneath the longer bearing 11 of the drop-frame, extending rearwardly beyond the bearing, where said sickle-shaft is journaled in the bifurcated portion 23 of a platform 24, secured to the rear portion of the longer bearing 11 of the frame. Within the bifurcated portion of the said platform 24 a balance-wheel 25 is secured on the sickle-shaft 22, and a strap-brake 26 is provided for this wheel, terminating in a foot-plate 27 within easy reach from the driver's seat 28, said seat being supported, preferably, from the platform 24.

A transverse shaft 29 is journaled in the drop-frame in front of the axle and parallel therewith. The transverse shaft 29 is provided near its left-hand end with a pinion 30 and at its right-hand end with a beveled gear 31. This beveled gear meshes with a beveled pinion 32, loosely mounted on the sickle-shaft 22, the pinion having a clutch-face which engages with a clutch 33, mounted to turn with the sickle-shaft, yet slide thereon, and said clutch is normally held in engagement with the said beveled pinion by means of a spring 34 or its equivalent. The pinion 30 on the transverse shaft 29 meshes with a driving-gear 35, loosely mounted on the axle, the left-hand side of the hub of said gear having a clutch-face 36, which is adapted to engage with a clutch 37, held to slide upon the axle and turn therewith. The clutch 37 is engaged by a fork 38, formed upon a shifting-lever 39. This shifting-lever is preferably arched, being carried upward and inward across the driving-gear 35 and pivoted to a standard 40, located on the longer box 11 of the drop-frame.

A horizontal arm 41 is formed at the inner end of the shifting-lever, and the fork of the lever is normally held in a position to bring the clutch in engagement with the clutch-face of the driving-gear by a spring 42, having bearing against the under face of the arm 41, as shown in Fig. 3. A foot-lever 43 is attached to the arm 41 of the shifting-lever, be-

ing fulcrumed upon a support in front of the said arm, and the said foot-lever 43 may be conveniently reached from the driver's seat. When this lever is pressed downward, the arm 41 will be carried downward likewise and the fork of the shifting-lever will be carried outwardly or in direction of the left-hand supporting-wheel, thereby taking the clutch from engagement with the driving-gear 35 and stopping the shaft 29. Whenever this shifting of the clutch 37 is brought about or whenever the machine stops, the sickle-bar will be reciprocated sufficiently long for it to clear the finger-bar from the standing grass by reason of the fact that the balance-wheel 25 will continue to revolve and by turning the sickle-shaft 22 will impart the necessary movement to the sickle-bar. Whenever it is desired to stop the balance-wheel, such result may be accomplished by applying the brakes 26.

At or about the rear central portion of the drop-bar, yet in front of the axle, eyes 44 are formed, between which the rear end of a tongue or pole 45 is pivoted. The drop-frame may be permitted to fall, so that the shoe 16 will travel on the ground, as shown in dotted lines in Fig. 2, or the drop-frame may be elevated from the ground, as shown in positive lines in Fig. 2, in any suitable or approved manner. In the drawings these movements are accomplished through the medium of a lever 46, fulcrumed in the pole or tongue 45, near its rear end, so as to be reached readily by the driver, the said lever having a chain 47 attached thereto, which extends down through the pole or tongue over a friction-roller 48, the chain being fastened at its forward end to the forward central portion of the aforesaid drop-frame.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a reaper or mower, the combination with an axle, ground-wheels thereon, and a drop-frame mounted on the axle and provided with a shoe at one forward corner, of a finger-bar carried by the shoe, a cutter-bar mounted on the finger-bar and provided with an elongated eye, a longitudinal sickle-shaft having at its forward end an eccentric working in the eye of the cutter-bar and at its rear end a balance-wheel, a gear-wheel loosely mounted on the sickle-shaft, a spring-pressed clutch engaging the gear-wheel, said clutch being held to slide on the sickle-shaft and to turn therewith, a transverse shaft having one end geared with the axle, and a gear-wheel on the other end of the transverse shaft, said gear-wheel meshing with the loose gear-wheel of the sickle-shaft, substantially as described.

2. In a reaper or mower, the combination with an axle, ground-wheels thereon, and a drop-frame mounted on the axle and having a shoe at one forward corner, of a finger-bar carried by the shoe, a cutter-bar mounted on

the finger-bar and provided with an elongated eye, a longitudinal sickle-shaft having at its forward end an eccentric working in the eye of the cutter-bar, a fly-wheel on the rear end of the sickle-shaft, a beveled gear-wheel loosely mounted on the said sickle-shaft and provided with a clutch-face, a spring-pressed clutch-sleeve mounted to slide on and to turn with the sickle-shaft and engaging the clutch-face of the bevel-gear, a transverse shaft, a bevel gear-wheel on one end of the transverse shaft and meshing with the bevel gear-wheel of the sickle-shaft, gearing between the other end of the transverse shaft and the axle, and a clutch for connecting said gearing with the axle, substantially as described.

3. In a reaper or mower, the combination with an axle, ground-wheels thereon, and a drop-frame mounted on the axle, of a cutter-bar at the forward part of the frame and having an elongated eye at one end, a sickle-shaft having at one end an eccentric working in the eye of the cutter-bar, a transverse shaft, beveled gearing between one end of the transverse shaft and the sickle-shaft, a pinion on the other end of the transverse shaft, a driving-gear loosely mounted on the axle and meshing with the pinion of the transverse shaft and provided with a clutch-face, a clutch held to slide on the axle and turn therewith, a pivoted and spring-pressed shifting-lever, and a pivoted foot-lever connected with the shifting-lever, substantially as described.

4. In a reaper and mower, the combination, with an axle provided with supporting-wheels, the left-hand supporting-wheel being of greater weight than the right-hand wheel, a frame pivotally connected with the axle, means for raising and lowering the frame, a finger-bar attached at the right-hand side of the frame, provided with a sickle-bar, terminating at its inner end in an eye, a shoe attached to the frame in which the said eye has movement, and a cam within the said eye, arranged to impart lateral movement thereto, of a shaft attached to the said cam, provided with a balance-wheel, a clutch and a loosely-mounted pinion normally engaged by said clutch on said shaft, a transverse driving-shaft in gear connection with the said pinion and provided with a gear at its other end, a driving-gear loosely mounted on the axle and meshing with the gear of the transverse shaft, a clutch driven by the axle and arranged for engagement with the driving-gear thereon, the said driving-gear being adapted for connection with the gear on the driving-shaft, and a shifting-lever for the said clutch, all combined for operation, substantially as herein set forth.

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